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Quality Engineering Test Report

SERIES: SP-75 75 WATTS SIGLE OUTPUT SWITCHING POWER SUPPLY

SAMPLE: A.SP-75-3.3 3.3V / 15A D.SP-75-12 12V /6.3A G.SP-75-24 24V /3.2A
B.SP-75-5 5V /15A E.SP-75-13.5 13.5V /5.6A H.SP-75-27 27V /2.8A
C.SP-75-7.5 7.5V /10A F.SP-75-15 15V /5A I.SP-75-48 48V /1.6A

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:85-264VAC O/P:FULL LOAD	D:58.73V-267VAC	P
2	LINE REGULATION	I/P:85~264VAC SPEC: O/P:FULL LOAD A: ±0.5% B: ±0.5% C:±0.5% D: ±0.5% E: ±0.5% G:±0.5% H: ±0.5% I: ±0.5%	A: 0% ~ -0.12% B: -0.12% ~ 0% C: -0.08% ~ 0% D: 0% ~ +0.049% E: 0% ~ 0% F: 0% ~ 0% G: -0% ~ +0% H: 0% ~ 0% I: -0.01% ~ -0.025%	P
3	LOAD REGULATION	I/P:230VAC SPEC: O/P:0% LOAD TO FULL LOAD A: ±1% B: ±1% C: ±1% D: ±0.5% E: ±0.5% F: ±0.5% G: ±0.5% H: ±0.5% I: ±0.5%	A: -0.5% ~ 0.23% % B: -0.5% ~ 0.23% C: -0.33% ~ 0.33% D: -0.149 % ~ 0.099% E: -0.1% ~ 0.089% F: -0.12% ~ 0.25% G: -0.074% ~ 0.05% H: -0.044% ~ 0.022% I: -0.037% ~ 0.1%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:85~264VAC SPEC: O/P:0% LOAD TO FULL LOAD A: ±2% B: ±2% C: ±2% D: ±2% E: ±2% F: ±2% G: ±1% H: ±1% I: ±1%	A: -0.87% ~ +0.118% B: -0.87% ~ +0.118% C: -0.69% ~ 0% D: -0.049% ~ -0.306% E: -0.23% ~ 0.044% F: -0.419% ~ 0% G: -0.02% ~ -0.182% H: -0.092% ~ 0% I: -0.079% ~ -0.22%	P
5	RIPPLE＆NOISE	I/P:230VAC SPEC: O/P: FULL LOAD A:80mV B:80mV C:80mV D:80mV E:80mV F:80mV G:100mV H:100mV I :100mV	A: 17mV B: 17mV C: 12mV D: 9mV E: 4mV F: 6mV G: 4mV H: 5mV I: 3mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC: 0.7A O/P:FULL LOAD	D:0.419A	P
7	MAX. INRUSH CURRENT	I/P:230VAC SPEC: 40A O/P:FULL LOAD	D:25.75A	P

NEXT

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC O/P:MIN. LOAD SPEC:+10%~-5% A:3.135V~3.63V B:4.75V~5.5V C:7.125V~8.25V D:11.4V~13.2V E:12.8 V~14.8V F:14.25V~16.5V G:22.8V~26.4V H:25.65V~29.7V I:45.6V~52.8V	A:3.05V~3.8V B:4.46V~5.809V C:6.33V~8.99V D:10.074V~13.731V E:11.28V~16.19V F:12.195V~17.465V G:19.64V~27.365V H:22.12V~33.2V I:40.44V~54.14V	P
9	SET UP TIME	I/P:230VAC O/P:FULL LOAD SPEC:600ms	D:431mS	P
10	HOLD UP TIME	I/P:230VAC O/P:FULL LOAD SPEC:20mS	D:42mS	P
11	EFFICIENCY	I/P:230VAC O/P: FULL LOAD SPEC: A:68% B:72% C:74% D:77% E:78% F:79% G:80% H:80% I :80%	A: 70.269 % B: 77.5 % C: 75.803 % D: 79.7 % E: 80.39 % F: 80.575 % G: 82.66 % H: 82.174 % I: 82.23 %	P
12	OVER LOAD PROTECTION	I/P:230VAC O/P:TESTING SPEC:105%~150%	A: 116 % B: 115 % C: 135 % D: 132 % E: 136.25 % F: 135 % G: 120.6 % H: 131.8 % I: 133 %	P
13	OVER VOLTAGE PROTECTION	I/P:230VAC O/P: TESTING SPEC:115%~135% A3.79~4.455 V B:5.75~6.75V C:8.625~10.125V D:13.8~16.2V E:15.52~18.225V F:17.25~20.25V G:27.6~32.4V H:31.05~36.45V I:55.2~64.8V	A: 4.04 V B: 6.02 V C: 9.04 V D: 15.1 V E: 17.09 V F: 19.17 V G: 31.1 V H: 34.66 V I: 62 V	P
14	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG--<2mA N-FG--<2mA	B: L-FG:1mA N-FG:0.5mA	P
15	GROUNDING CONTINUITY	SPEC: FG--CHASSIS<100m Ohms/2min	D: 67mOhms	P
16	INSULATION RESISTANCE	SPEC: O/P-FG 500VDC / 100M Ohms MIN. I/P-O/P 500VDC / 100M Ohms MIN. I/P-FG 500VDC / 100M Ohms MIN.	D: O/P-FG >100MOhms I/P-O/P >100MOhms I/P-FG >100MOhms	P

PREVIOUS NEXT

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>TEST CONDITION / SPECIFICATION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>17</td><td>DIELECTRIC / WITHSTAND VOLTAGE</td><td>SPEC： I/P- O/P: 3000VAC/ 60 sec (10mA CUT-OFF)
I/P - FG: 1500VAC/ 60 sec (10mA CUT-OFF)
O/P - FG: 500VAC/60sec (10mA CUT-OFF)</td><td>D: I/P-O/P :6.15mA
I/P-FG :4.92mA
O/P- FG :9.27mA</td><td>P</td></tr>
<tr><td>18</td><td>BURN-IN TEST</td><td>I/P: 230VAC O/P:FULL LOAD
TA:22.6℃ BURN-IN DURATION : 14 hrs</td><td>B:AFTER 14hrs NON BREAK</td><td>P</td></tr>
<tr><td rowspan="3">19</td><td rowspan="3">ENVIRONMENT TEST</td><td>1.LOW TEMPERATURE TEST
I/P : 230 VAC O/P FULL LOAD
AMBIENT TEMPERATURE ：-10.1°C</td><td>B :
AFTER 4 hrs POWER ON OK</td><td rowspan="3">P</td></tr>
<tr><td>2.HIGH AMBIENT TEMPERATURE TEST
I/P : 230VAC O/P: FULL LOAD
TEMPERATURE ：33.8°C</td><td>B :
AFTER 14hrs NON BREAK</td></tr>
<tr><td>3.HIGH HUMIDITY HIGH VOLTAGE ON/OFF TEST
I/P : 272VAC O/P : FULL LOAD
AMBIENT TEMPERATURE ：25°C
AMBIENT HUMIDITY : 95%</td><td>B :
AFTER 12 hrs POWER ON OK</td></tr>
<tr><td>20</td><td>TEMPERATURE RISE TEST Trise OF PARTS</td><td colspan="2">B: I/P : 230VAC AFTER 14 hrs BURN-IN
O/P : FULL LOAD TA : 22.6°C
<table>
<tr><th></th><th>POSITION</th><th>P/N</th><th>TEMP</th><th>Trise</th></tr>
<tr><td></td><td>BD1</td><td>BRIDGE DIODE</td><td>74.3°C</td><td>51.7°C</td></tr>
<tr><td></td><td>Q2</td><td>MAIN TRANSISTOR</td><td>73.6°C</td><td>51°C</td></tr>
<tr><td></td><td>Q1</td><td>PFC TRANSISTOR</td><td>64.2°C</td><td>41.6°C</td></tr>
<tr><td></td><td>T1</td><td>MAIN TRANSFORMER COIL</td><td>82.2°C</td><td>59.6°C</td></tr>
<tr><td></td><td>T1</td><td>MAIN TRANSFORMER CORE</td><td>78.8°C</td><td>56.2°C</td></tr>
<tr><td></td><td>D19</td><td>O/P DIODE</td><td>85.3°C</td><td>62.7°C</td></tr>
<tr><td></td><td>C52</td><td>O/P FILTER CAPACITOR</td><td>72.6°C</td><td>50°C</td></tr>
<tr><td></td><td>L2</td><td>O/P CHOCK</td><td>81.9°C</td><td>59.3°C</td></tr>
<tr><td></td><td>C5</td><td>I/P FILTER CAPACITOR</td><td>65.7°C</td><td>43.1°C</td></tr>
<tr><td></td><td>LF1</td><td>LINE FILTER COIL</td><td>61.1°C</td><td>38.5°C</td></tr>
<tr><td></td><td>D2</td><td>PFC DIODE</td><td>73.8°C</td><td>51.2°C</td></tr>
</table></td><td>P</td></tr>
<tr><td>21</td><td>LIFE CYCLE</td><td colspan="2">SUPPOSE C42 IS THE MOST CRITICAL COMPONENT
I/P : 230VAC O/P：FULL LOAD Ta : 25°C Tc52 : 75°C Life:57216hrs
I/P : 230VAC O/P ： FULL LOAD Ta : 30°C Tc52 : 78.7°C Life:44270hrs</td><td>P</td></tr>
<tr><td>22</td><td>CRITICAL COMPONENT RECORD
(FOR QC INSPECTION REFERENCE ONLY)</td><td colspan="3">B :
FUSE :2A/250V GFE/GMA
BRIDGE DIODE : D3SB60 4A/800V GL
LINE FILTER :TF-714 EI-78
TRANSFOMER :TF-716 EER-28
OUTPUT DIODE :32LTQ030 30A/30V
OUTPUT CAPACITOR :RUBYCON 2200uF/10V 105°C YXG
INPUT CAPACITOR :RUBYCON 100uF/400V,105°C AXW
P.C.B :SP-75 CEM-3 20Z SS</td></tr>
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PREVIOUS NEXT

DATE	SAMPLE	TEST RESULT	TEST	APPROVAL
20010108	RD SAMPLE 3.3V,5V,7.5V,12V , 13.5V,15V,24V,27V , 48V	PASS	VINCENT	Max Lin
20010116	PRDUCTION SAMPLE A101A15 3.3V,5V,7.5V,12V 13.5V,15V,24V,27V ,48V	PASS	SAM CHEN	Max Lin
20010531	PRDUCTION SAMPLE A105C02 5V,24V,48V	PASS	VINCENT	Max Lin
20011226	PRDUCTION SAMPLE A109B19 12V	PASS	VINCENT	Max Lin
20020222	PRDUCTION SAMPLE A202A17A 12V	PASS	VINCENT	Max Lin

PREVIOUS